

8-Hour Ozone Standard in Kentucky

Implementation
October 2003



Ozone is.....

- ◆ Ozone irritates the respiratory system, reduces lung function, aggravates asthma and chronic lung diseases.
- ◆ Repeated ozone damage to children's developing lungs may lead to reduced lung function later in adulthood.
- ◆ Ozone is typically not emitted, but formed from other pollutants
 - ◆ Nitrogen Oxides (NO_x)
 - ◆ Volatile Organic Compounds (VOCs)
- ◆ Ozone is a concern in the summer months when weather conditions needed to create ozone are more prevalent.
 - ◆ Sunlight
 - ◆ Heat



Ozone Standard

- ◆ EPA mandated by the Clean Air Act to protect human health within an adequate margin of safety
- ◆ 8-hour standard adopted in 1997
- ◆ More stringent than previous standard
 - ◆ .08 ppm
 - ◆ 3 years of monitoring data
 - ◆ 4th highest 8 hour value / each year
- ◆ violation exists if average = .085 or greater



Effective Dates

- ◆ States submit proposed boundaries by July 15, 2003
- ◆ EPA preliminary decision late summer (*October 31*)
- ◆ 120 day consultation period - EPA/states (through fall 2003)
- ◆ EPA to publish notice early 2004
- ◆ Effective date -- April 15, 2004
 - ◆ EPA consent decree



Nonattainment Impacts

◆ Industry Requirements

- ◆ Affects industries inside nonattainment boundaries
 - ◆ **Tighter emission controls**
 - ◆ **Must obtain/purchase emission credits or offsets for increased emissions in area**
- ◆ Smaller industries and modifications not directly affected

◆ Transportation/Road Plans

- ◆ Emissions from vehicles must be estimated and growth projected
- ◆ If a mobile emissions increase is projected, federal highway money not eligible for use in plan



Boundary Designation Criteria

- ◆ EPA's Mandatory Boundaries

- ◆ Any county with a violation of the 8-hour ozone standard

- ◆ EPA's Presumptive Boundaries

- ◆ Metropolitan Statistical Areas (MSAs)
- ◆ If states choose to differ from presumptive, 11 criteria to address

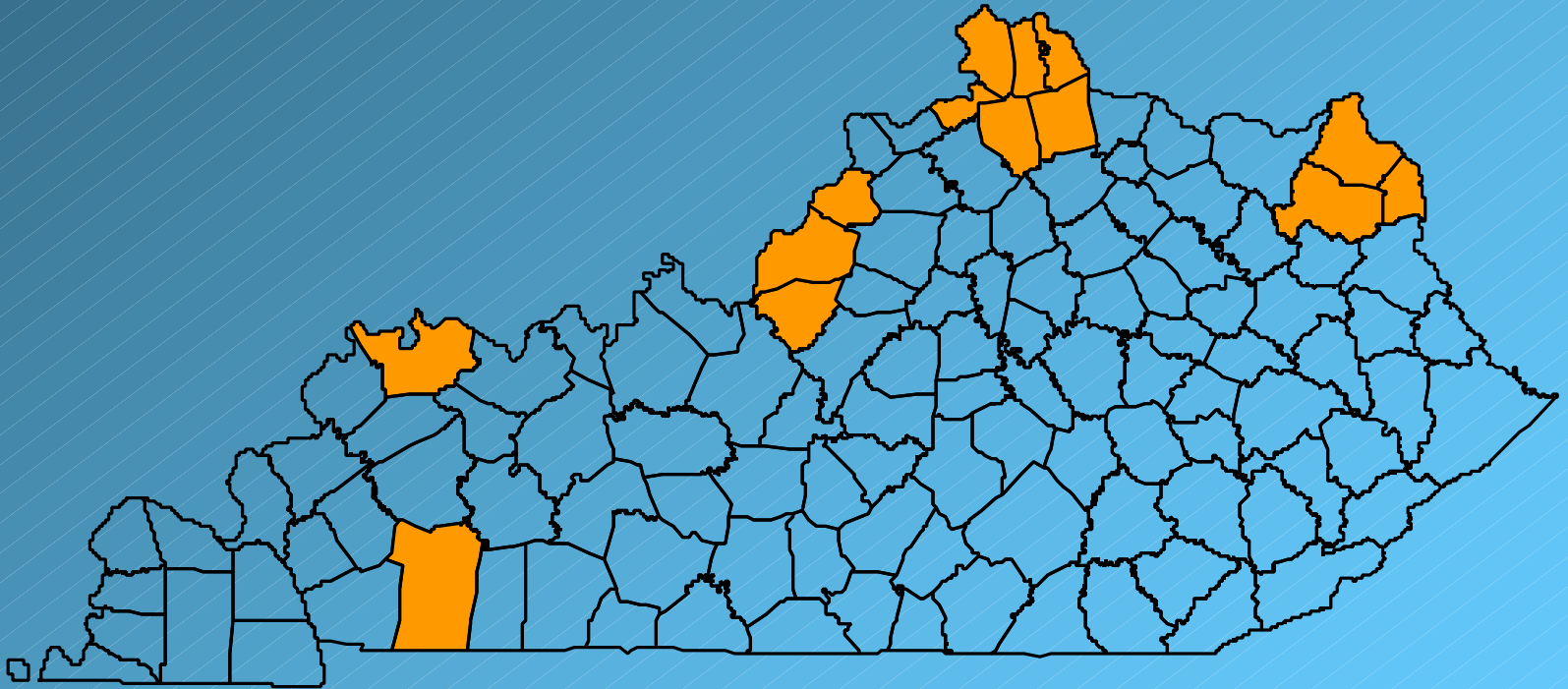


Boundary Criteria

- ◆ 2000 - 2002 ozone monitoring data
- ◆ Emissions in areas or influencing areas
- ◆ Expected Growth
- ◆ Level of control of emissions sources
- ◆ Location of emission sources
- ◆ Population density & urbanization
- ◆ Traffic & commuting patterns
- ◆ Meteorology
- ◆ Regional Emissions Reductions
- ◆ Geography/topography
- ◆ Jurisdictional boundaries

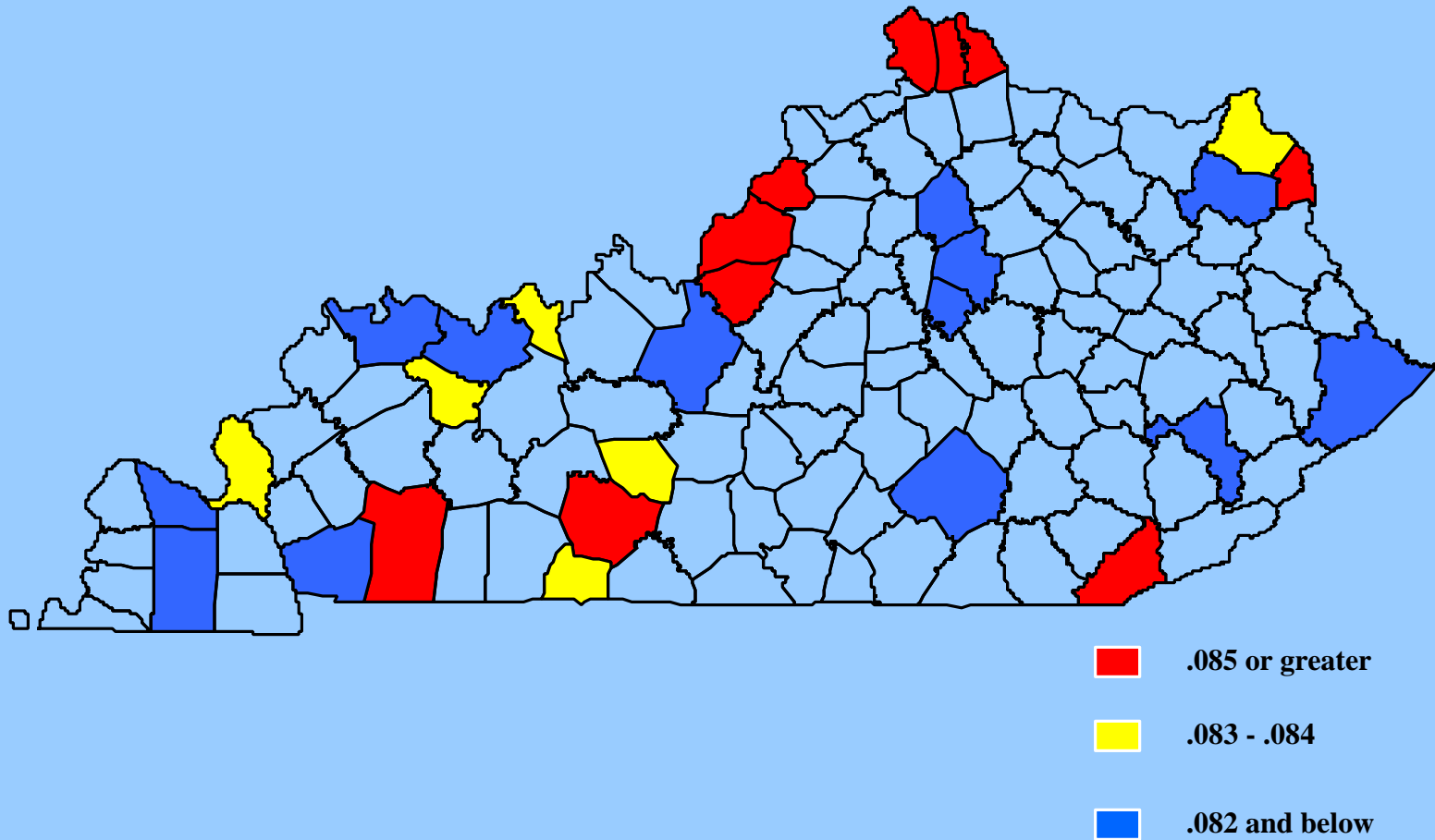


Impacted Metropolitan Statistical Areas



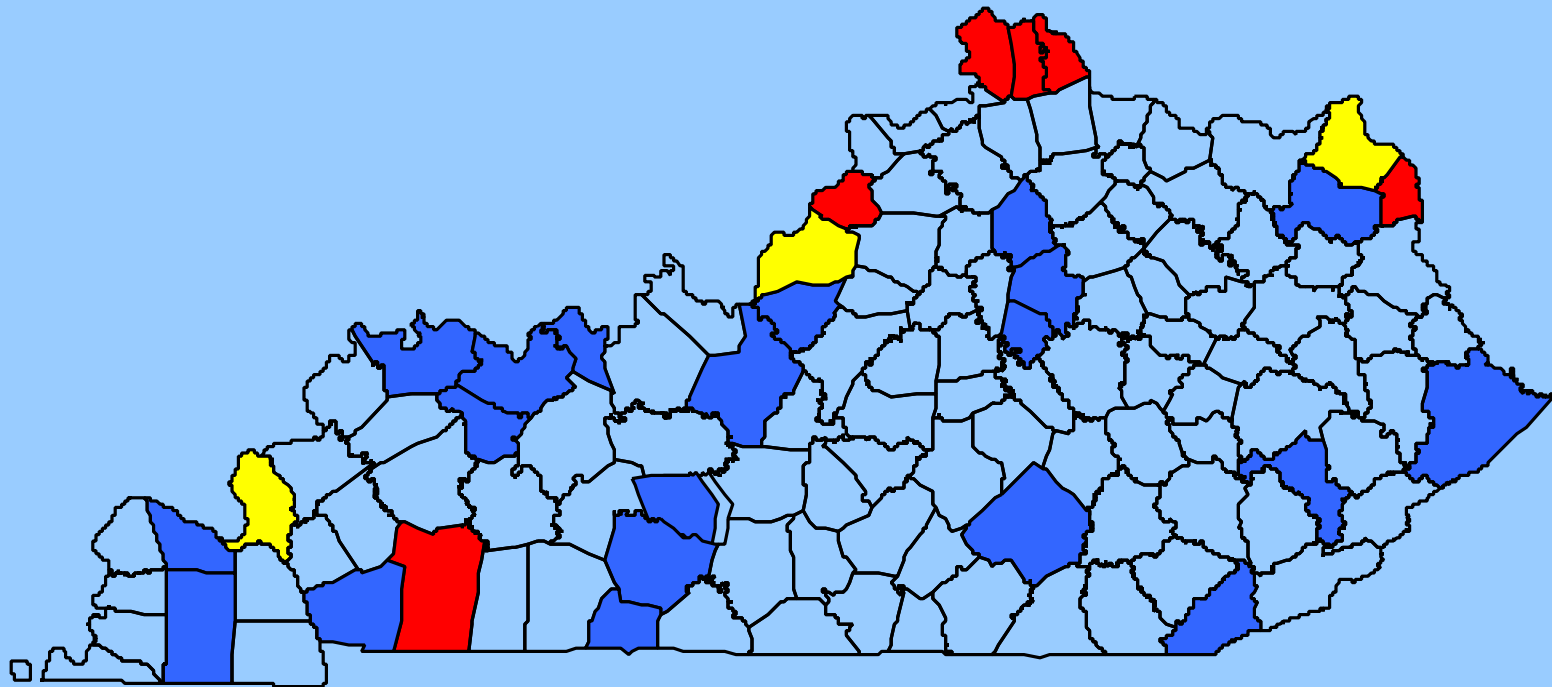
Monitoring Results in Kentucky

2000-2002 Monitoring Data



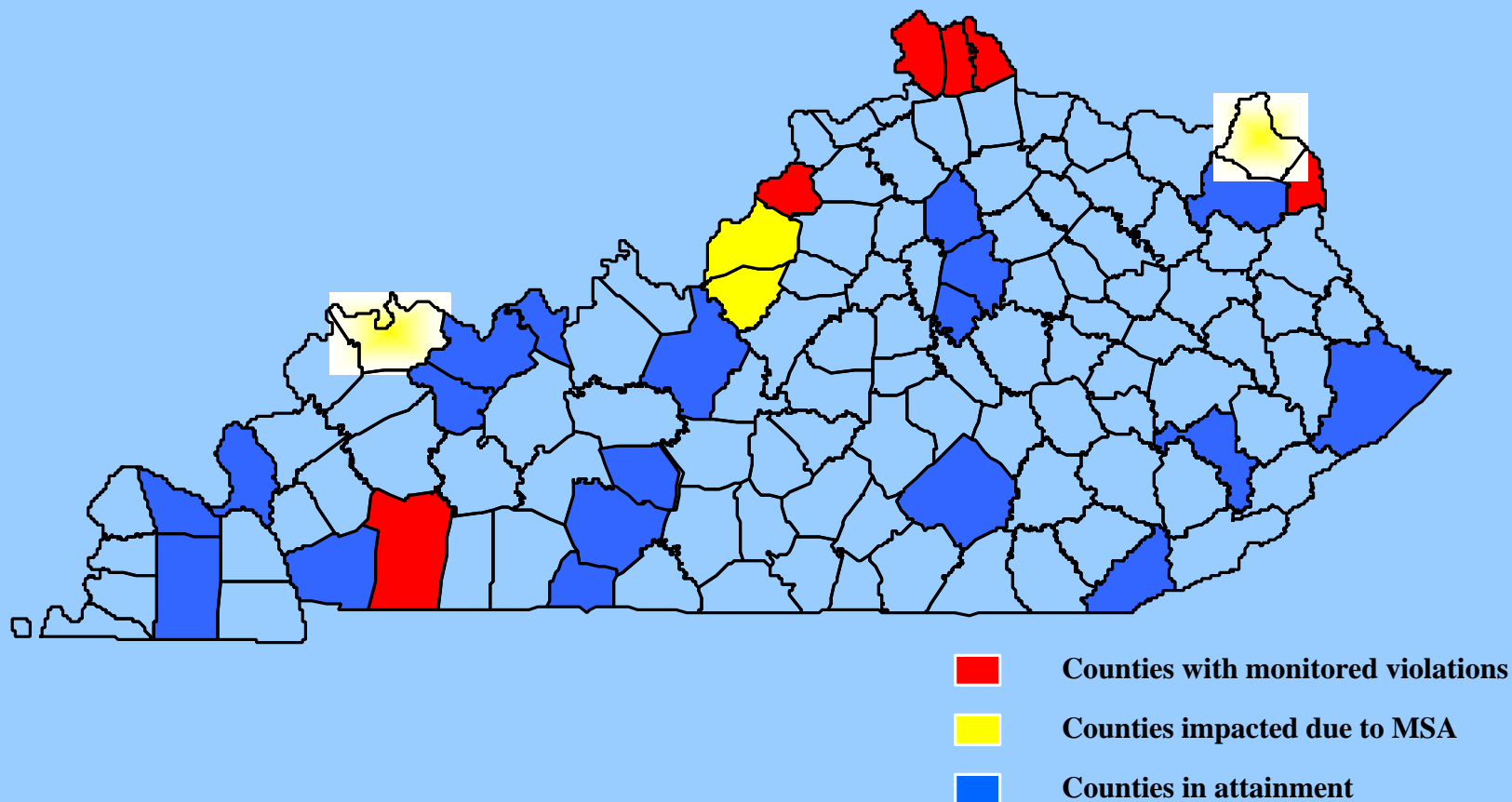
Monitoring Results in Kentucky

2001-2003 Monitoring Data



Anticipated Nonattainment Designations in Kentucky

2001-2003 Monitoring Data



Community Outreach

- ◆ Division for Air Quality visited each area of the state potentially impacted by 8-hour ozone standard
 - ◆ Met with local government and business leaders on potential impacts after the standard is implemented
 - ◆ Provided information on local initiatives to help improve air quality
- ◆ Will remain in contact after final designations are made
 - ◆ Based on latest monitoring data, no new areas will be impacted during these initial designations



Continuing Activities

- ◆ **EPA has not finalized implementation guidance**
- ◆ **Reproposal for additional comments published on October 21 with a 15 day comment period**
- ◆ **EPA continues to struggle with appropriate method for designation of areas not meeting the standard**
 - ◆ **Subpart 1 or Subpart 2 of the CAAA amendments**
 - ◆ Subpart 1 prior to 1990
 - ◆ Subpart 2 – severity based classifications
 - ◆ Marginal, Moderate, Serious, etc.



Control Options

- ◆ Unclear what may be required in each area until EPA adopts final implementation guidance for the 8-hour standard and final designations are made.
- ◆ Many national/regional control programs are being implemented or soon to be implemented
 - ◆ NOx SIP Call
 - ◆ New vehicle standards
 - ◆ Diesel and gasoline
 - ◆ New fuel requirements
 - ◆ Diesel and gasoline



Next Steps

- ◆ **Kentucky submitted proposal on July 14, 2003**
 - ◆ EPA has reviewed, one of the best in Region 4
- ◆ **Letter to states to discuss differences by end of October**
- ◆ **EPA will propose designations winter 03-04**
- ◆ **Final designations by April 15, 2004**
- ◆ **State will prepare extensive inventories & begin SIP development process**
- ◆ **Initial SIP submittal due in 2007**

